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Growth
in Georgia

TRIP REPORT

2016 INTERNATIONAL SEMINAR ON WATERSHED
MANAGEMENT

USAID GOVERNING FOR GROWTH (G4G) IN GEORGIA

5 MAY 2016

This publication was produced for review by the United States Agency for International Development. It was prepared by Deloitte Consulting LLP. The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ABSTRACT

This trip report describes the visit of the environmental specialist from the USAID project Governing for Growth (G4G) in Georgia to the United States (US) to attend the “2016 International Seminar on Watershed Management.” The seminar, took place during April 3-23, 2016, in Arizona.

The seminar aimed to stimulate interaction and learning on a broad spectrum of issues related to watershed management. It gave an opportunity for participants to examine management techniques, planning, monitoring and problem-solving tools for watershed management through field visits, lectures, participant presentations, group work and facilitated discussions.

The seminar addressed topics related to the economic value of water and innovative solutions for sustaining and creating financial incentives to promote best management practices. The seminar also showcased different approaches to conflict management, community involvement, stakeholder participation and partnerships.

In the framework of the seminar, participants met with governmental agencies, private sector representatives, non-governmental sector and stakeholders involved in water resource management and water use.

ACRONYMS

ASARCO	American Smelting and Refining Company
AUDER	Actors United for Rural Development
FWPP	Flagstaff Watershed Protection Project
G4G	Governing for Growth in Georgia
U.S.	The United States
USAID	The United States Agency for International Development
USFS	The United States Forestry Service

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INTRODUCTION

Environmental specialist, Ketil Skhireli of G4G, attended the “2016 International Seminar on Watershed Management” in Arizona. The purpose of the visit was to learn about the broad spectrum of issues related to watershed management, to focus on innovative concepts and methodologies related to watershed management, and advance the participant’s knowledge in creating financial mechanisms for ecosystem services to ensure conservation and sustainable management of water resources. Lessons learned from the seminar can be reciprocated in local context and used for G4G’s project objectives in water resource management. The seminar was organized by the United States Forestry Service (USFS). The USFS, in the framework of its international programs, promotes sustainable forest management and biodiversity conservation internationally through hosting seven international seminars. The seminars stimulate deliberations and problem solving for issues related to natural resources management.

The International Seminar on Watershed Management is held annually in the southwestern US. The southwestern US is an excellent case study for environmental professionals working in the water sector. There are significant challenges considering the area’s extremely scarce water supply. These include increasing demand for this resource, legal conflicts and competing usage. The seminar is designed for mid-career professionals who desire to take part in an interactive and intensive training and exchange program on integrated watershed management. The program is sponsored by the USFS’s international programs.

The seminar provided an overview of watershed management, direct experience in applying concepts and methods in the field, opportunities for personal and professional development, and exposure to professionals from all over the world.

EXECUTIVE SUMMARY

The “2016 International Seminar on Watershed Management” was held during April 3-23, 2016, in Arizona. Twenty-seven participants (list of participants: appendix A) from more than 15 countries attended. Seminar covered three weeks and included a great variety of topics related to river and watershed management (seminar schedule is attached as an appendix B).

The overall goals of the seminar were to:

- Understand, discuss and articulate the impact of multiple uses on watershed;
- Think critically about the economic value of water and proven solutions to promote best management practices (e.g. water payment approaches, financial incentives, etc.);
- Identify techniques and skills to facilitate community participation, discuss various strategies for environmental conflict resolution and negotiate watershed management issues;
- Exchange ideas and build network with colleagues from around the world.

The first week of the seminar, from April 3 to 10, was devoted to discussions of watershed management challenges, integrated watershed management approaches and payment schemes for ecosystem services with the USFS and its partners in Tucson, Arizona. During this time, participants visited American Smelting and Refining Company (ASARCO) Mission Mine and Coronado National Forest.

Sessions of the first week covered following topics:

- Watershed health, including: water quality monitoring, integrated approaches to watershed management, watershed health indicators, Clean Water Act and illustrations of best management practices;
- Integrated approach to multiple use within the watershed;
- Environmental conflicts, negotiations and mechanisms of mediating watershed-related conflicts;
- The concept of payment schemes as an innovative way to promote watershed health (focusing on successful case of Mexico Initiative).

Week two, from April 11 to 16, was held in Tucson, Safford and Phoenix, Arizona. This week was spent mostly in the field meeting land managers and discussing watershed management issues on the ground. Visits included:

- Aravaipa Canyon Reserve, the Nature Conservancy;
- San Carlos Apache Nation;
- Gila Watershed Partnership;
- Roosevelt Reservoir;
- Tonto National Forest;
- Tres Rios Wetland (City of Phoenix);
- Salt River Project.

Week two sessions focused on learning techniques to establish partnerships and build trust, managing upstream watershed uses to endure provision of the benefits to downstream users, finding out about ways to anticipate user needs, take proactive approaches to working with multiple users, and integrate users into forward planning, examine legal issues of water rights and understanding how projections are made for water supply and demand.

The final week, from April 17 to 23, took place in Flagstaff, Arizona. The time was split between field visits, lecture sessions and classroom activities for watershed application planning. During this week, uses on watershed was further explored. Sessions focused on data collection and monitoring related to grazing, soil conditions, and watershed health. Field visits and sessions also included topics related to streamside restoration efforts, exploring the ways of community engagement and building partnerships for better management of watersheds. Field visits included:

- Coconino National Forest;
- Verde River Valley;
- Flagstaff Watershed Protection Project;
- Grand Canyon National Park.

MAIN TAKEAWAYS FROM THE SEMINAR

The “International Seminar on Watershed Management” is a unique event where participants are not only lectured on issues related to water and watershed management but also are given a chance to think through each topic, process and analyze them and consider applicability of the methodologies or concepts at the national level. The sessions are highly interactive. Each participant is engaged in discussion. After each session of lectures, participants give a presentation on the subject of the day. Seminar included substantial group work, which gave an opportunity to learn about watershed management issues from peers in their own countries. In this way, participants are exposed to global perspectives.

The seminar was very well organized in many ways: Administrative set-up, content, guest speakers and field visits.

The seminar is beneficial for mid-career professionals to learn and share their own experience. It also helps participants to learn new initiatives and concepts related to the different aspects of watershed management. The seminar was organized in a way that helped participants not only to learn and talk about practical solutions, and best management practices for watershed management, but also to see examples of successful practices in the field.

The seminar helped to link all aspects of the integrated natural resources management and to understand the holistic picture for conservation and sustainable management of rivers and watersheds.

The main takeaways were:

- Best management practices for managing watersheds (simple, cheap green infrastructural solutions successfully applied by US professionals);
- Water allocation practices in Arizona and water rights;
- In many cases, success in watershed management depends on establishment of partnerships, consistent and transparent collaboration and coordination among stakeholders from the very early stages of planning;
- Having strong communication strategy and plan and awareness raising campaigns are very important and usually takes several years;
- Payments schemes of environmental services for watershed sustainable management: Mexico example shows that payment is well defined market-based mechanism (similar to subsidies and taxes) encouraging rational use of natural resources.

APPENDICES

APPENDIX A: LIST OF PARTICIPANTS

The International Seminar on Watershed Management 3-23 April 2016 Arizona			
Country		Name	Position and Organization
1	Colombia	Juanita Gonzalez Lamus	Magdalena Climate Change Specialist; The Nature Conservancy
2	Colombia	Pablo Andres Velasquez Franco	Forest Engineer; Corantioquia
3	Colombia	Andres Plazas Torres	Presidente; Asociación Amigos de la Montaña
4	Ethiopia	Moges Worku Bekele	Productive Safety Net Advisor; USAID Ethiopia
5	Ethiopia	Gessesse Dessie Gebreegziabher	Climate Change Advisor; US Forest Service, International Programs
6	Georgia	Ketevan Skhireli	Environmental Specialist; G4G
7	Guinea	Fassou Thea	Technical Assistant; NGO Actors United for Rural Development (AUDER)
8	Kazakhstan	Marzhan Srymova	Scientific Affairs Assistant; US Embassy Astana
9	Kenya	Stella Gatama	Research Scientist; Kenya Forestry Research Institute
10	Kenya	Martin Ngutuku Mulongo	Water, Sanitation and Hygiene Specialist; USAID Kenya
11	Kenya	Rose Adhiambo Akombo	Assistant Director; Kenya Forest Service
12	Kenya	Alphonse Chenjerayi Guzha	In-country Coordinator/Kenya; US Forest Service, International Programs
13	Kyrgyz Republic	Bilimbek Azhibekov	Project Coordinator; CAMP Alatau Public Foundation
14	Liberia	Alaric Mulbah Korvah	Assistant Field Coordinator; Mano River Union
15	Maldives	Mohamed Fazeeh	Assistant Director; Ministry of Environment and Energy
16	Mexico	Gabriela Caloca Michel	Project Manager; Pronatura Noroeste, A.C.
17	Mexico	Rossana Landa Perera	Watershed Conservation Coordinator; Fondo Mexicano para la Conservación de la Naturaleza A.C.
18	Nepal	Dhirendra Kumar Pradhan	Planning Officer Under Secretary (Watershed Management); Department of Soil Conservation and Water Management
19	Nepal	Maheswor Shrestha	Senior Divisional Engineer; Water and Energy Commission Secretariat; Government of Nepal
20	Nepal	Khadga Basnet	Professor; Tribhuvan University
21	Nepal	Manish Raj Pandey	Senior Conservation Officer; National Trust for Nature Conservation
22	Pakistan	Muhammad Nawaz	Development Specialist – Irrigation; USAID Pakistan
23	Pakistan	Mohsin Ali Rose	Project Management Specialist; USAID Pakistan
24	Palau	Joyce Kloulechad Beouch	Belau Watershed Alliance Coordinator; Palau Conservation Society
25	Peru	Dirk Jan ten Brink	Project Management Specialist; USAID Peru
26	Rwanda	Philippe Kwitonda	Watershed Management Officer; Rwanda Natural Resources Authority
27	Zambia	Emmanuel Chirwa	Forestry Technician; Forestry Department

APPENDIX B: SEMINAR SCHEDULE

3-23 April 2016	
1 st Week, April 3-10, 2016, Tucson	
April 3, 2016	Arrival to Tucson
April 4, 2016 9:00 a.m. – 5:00 p.m.	Seminar opening Watershed planning and management <ul style="list-style-type: none"> Clean Water Act Watersheds condition framework: definitions, indicators, assessment, approaches Country presentations
April 5, 2016 8:30 a.m. – 6:30 p.m.	Best management practices <ul style="list-style-type: none"> Arizona as a case study Watershed planning and management challenges Country presentations
April 6, 2016 7:30 a.m. – 5:00 p.m.	Visit to Coronado National Forest <ul style="list-style-type: none"> Challenges in managing natural resources and multiple uses in a watershed Use versus conservation and protection Environmental conflict resolution <ul style="list-style-type: none"> Principles and concepts of environmental conflict resolution Cases examples (New York City, Atlanta, etc.)
April 7, 2016 8:30 a.m. – 5:30 p.m.	Mining and Us Forestry Service requirements <ul style="list-style-type: none"> U.S. Forest Service requirements Operation, mitigation and reclamation requirements Visit to ASARCO mine
April 8, 2016 8:30 a.m. – 5:00 p.m.	Review of the 1 st Week Payment schemes <ul style="list-style-type: none"> The Mexico initiative
April 9, 2016 8:30 a.m. – 4:00 p.m.	Payment schemes <ul style="list-style-type: none"> The Mexico initiative – continued Preview of Week 2
April 10, 2016	Free day
2 nd Week, April 11-16, 2016, Tucson, Safford, Phoenix	
April 11, 2016 8:30 a.m. – 1:00 p.m. Tucson	Watershed Management Group (Community-based solutions) Living Lab and tour site (Urban watershed management initiatives) <ul style="list-style-type: none"> Wash facilities Low-cost water saving/reuse technologies Travel to Safford
April 12, 2016 8:30 a.m. – 3:30 p.m. Safford	Field trip to Aravaipa Canyon Wilderness Area <ul style="list-style-type: none"> Mission and role of the Nature Conservancy Challenges and successes of the partnership between landowners, U.S. Bureau of Land Management, and the Nature Conservancy in managing the Aravaipa watershed area
April 13, 2016 7:30 a.m. – 4:30 p.m. Safford	San Carlos Apache Nation Site visit <ul style="list-style-type: none"> Importance of the traditional knowledge Environmental and natural resources issues Gila Watershed Partnership site visit <ul style="list-style-type: none"> Benefits and challenges of grassroots watershed planning and management
April 14, 2016 8:30 a.m. – 5:00 p.m. Phoenix	Salt River Watershed and Tonto National Forest <ul style="list-style-type: none"> Management challenges of multiple uses in a watershed including: grazing, roads, wilderness designation, recreation, water production for the city of Phoenix, importance of managing upstream watershed uses to ensure the health of downstream watershed Visit to Acaica day use area <ul style="list-style-type: none"> Techniques of building partnerships Cases of integrating feedback from user groups into decision making and management
April 15, 2016 7:30 a.m. – 5:00 p.m.	Tres Rios Wetlands <ul style="list-style-type: none"> History, background and goals of the Tres Rios Project

Phoenix	<ul style="list-style-type: none"> • Importance of establishing the wetland • Challenges of using reclaimed water Salt River Project <ul style="list-style-type: none"> • Managing water in the desert • water rights, supply and challenges • Groundwater Recharge
April 16, 2016	Free day
3rd Week, April 17-23, 2016, Flagstaff	
April 17, 2016 8:30 a.m. – 1:30 p.m. Phoenix	Review of Week 2 Grazing and soils <ul style="list-style-type: none"> • US Forest Service and grazing • Management of grazing • Mitigating impacts of grazing • Overview of soils: soil types, chemistry, mapping, importance of soils to watershed management
April 18, 2016 7:30 a.m. – 4:00 p.m. Flagstaff	Visits to Coconino National Forest: Red Rock Ranger District <ul style="list-style-type: none"> • Soil condition assessment • Impact on Upper Verde Watershed and downstream consequences • History of Grazing allotments, permits and the range management program Verde River site visit <ul style="list-style-type: none"> • Irrigation and farming best management practices • Regional collaboration
April 19, 2016 7:30 a.m. – 4:30 p.m. Flagstaff	Flagstaff Watershed Protection Project (FWPP) <ul style="list-style-type: none"> • Case of partnership for FWPP • Mechanisms of payment scheme for FWPP Field visit to Schultz Fire and FWPP
April 20, 2016 9:00 a.m. – 5:00 p.m. Flagstaff	Seminar Application Planning
April 21, 2016 9:00 a.m. – 12:30 p.m. Flagstaff	Seminar Application Planning
April 22, 2016 7:30 a.m. – 3:00 p.m. Flagstaff	Visit to Grand Canyon National Park
April 23, 2016 Flagstaff	Departure

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